

Learning A-Z

level **U**

Multi-level

U X Z1

Grade

4

Word Count

1,843

Lexile

650L

Nonfiction • Informational

Refer to the Focus Question on page 2 of this title to guide discussion and support additional learning connected to the text.

The Amazon rainforest is a rich, living treasure. Filled with more kinds of insects, plants, and animals than anywhere else in the world, the Amazon is a complex and fascinating habitat. **The Amazing Amazon** provides students a comprehensive look at this intricate world through detailed text and colorful photographs. The book can also be used to teach author's point of view and how to effectively summarize a text. The book is also available for levels X and Z1.

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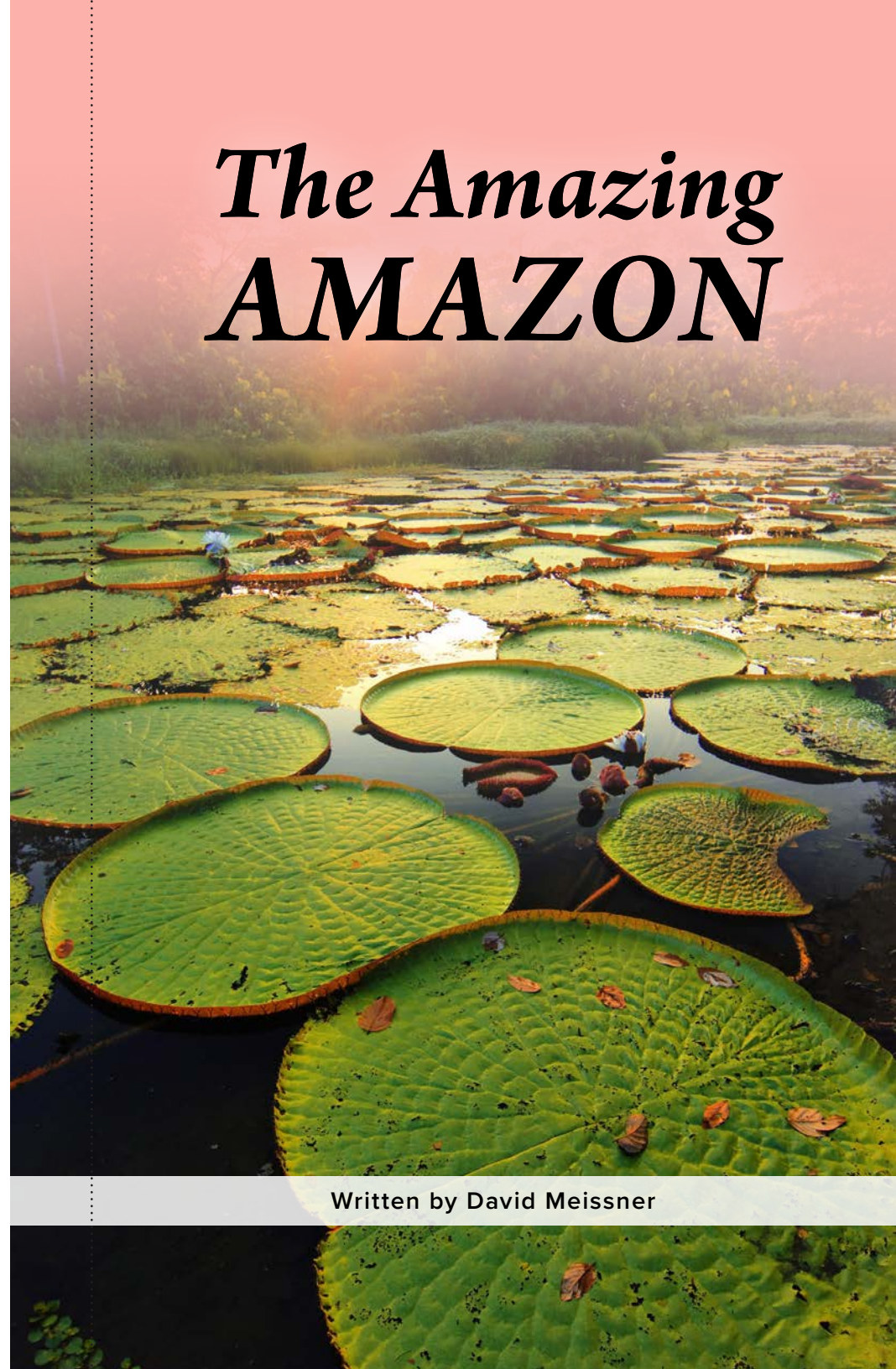
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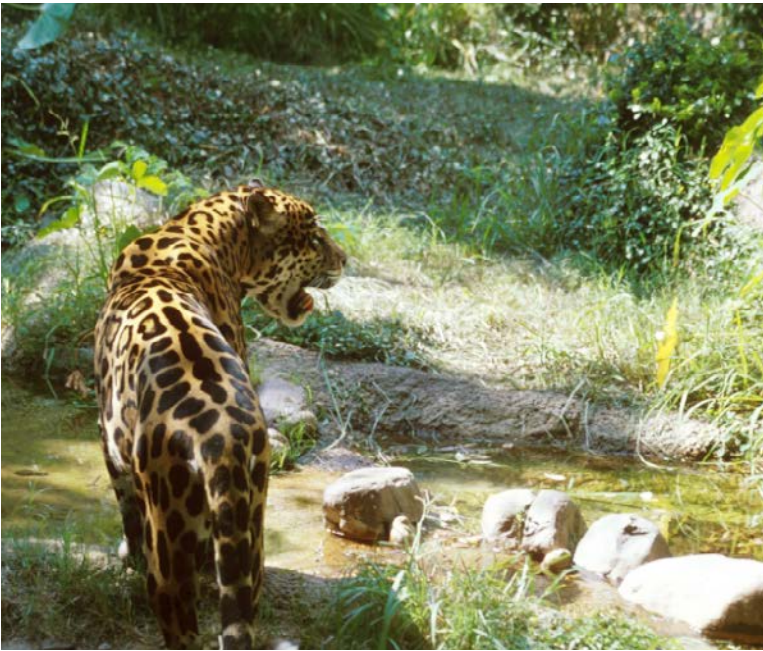
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The Amazing **AMAZON**



Written by David Meissner

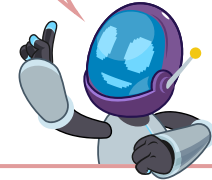
The Amazing **AMAZON**



Written by David Meissner

Focus Question

What makes the Amazon
a unique habitat?



Words to Know

carbon dioxide	prehensile
epiphytes	ranges
ferns	species
fungi	talons
nutritious	territories
peccary	unsuspecting

Connections

Writing and Art

Create a travel brochure for the Amazon that informs readers and persuades them to visit. Use information from the book as well as outside resources.

Math

Choose two animals from the text. Find and record the difference in size between these two animals. Then, draw a picture of both animals to scale and label it.

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NOTE: Rainforest can be spelled in two ways: *rainforest* or *rain forest*. We will use the one-word spelling. And when this book uses the word *rainforest*, it means tropical rainforest.



In the Amazon rainforest

Chapter 1: There Is a Place

There is a place where monkeys swing and howl. There is a place where jaguars leap from tree to tree. Bananas and pineapples grow for free. Tiny frogs live in flowers. Pink-colored dolphins swim in the river. Storms come often, and the air is sweet.

A little sunlight filters through the vines and leaves, but it is mostly dark here on the ground. It is hot, steamy, and still. Rainwater flows from leaf to leaf.

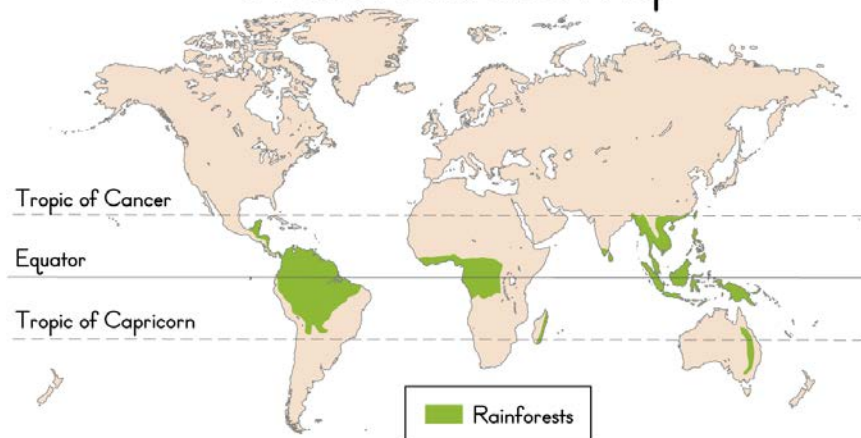
You are sweating. A bug lands on your neck. An ant quietly walks across your shoe. Suddenly a little brown monkey swings to a nearby branch. Then a bright green bird flies past. Welcome to the Amazon rainforest.

Rainforests

Tropical rainforests are forests where it rains a lot. In fact, a tropical rainforest receives between 150 and 400 centimeters (59–157 in) of rain every year. They are also warm. The temperature **ranges** from 25° to 35° Celsius (77°F–95°F). Rainforests are green year-round. Their hot and humid climate is perfect for tall trees and other plants. The really thick parts of rainforests are what we call *jungles*.

Tropical rainforests cover a small part (about 6 percent) of Earth's surface. But more than half (50 percent) of the world's plant and animal **species** are found in them! Rainforests are usually near Earth's equator. Most of the world's rainforests are in Africa, Southeast Asia, and South America.

World Rainforest Map



The rainforest's dense foliage

The Amazon

The Amazon rainforest is in South America. It is the largest tropical rainforest in the world. It has more kinds of insects, plants, and animals than any other place on Earth. Every year, scientists discover new species of insects and plants here.

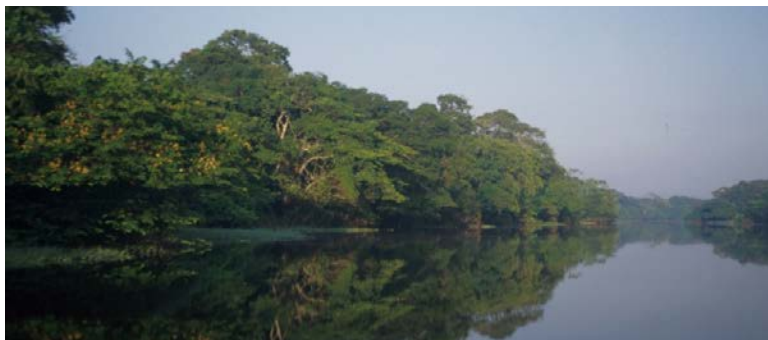
The Amazon River flows through the heart of this rainforest. Thousands of other rivers and streams empty into it. Many fish and other animals live in the Amazon River.

This book will take you through the Amazon rainforest. You will travel from the tallest trees to the rainforest floor. Along the way, you will meet an eagle, monkey, jaguar, and ant. You will even hear what they would say—if they could talk.



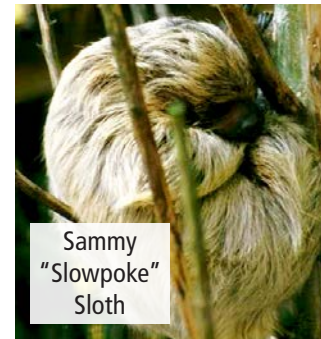
So just how big is the Amazon River?

- The Amazon River can be more than 48 kilometers (30 mi) across at its widest point during the rainy season.
- It flows almost 6,437 kilometers (4,000 mi) to the Atlantic Ocean.
- The river's arapaima fish can grow to be 3 meters (10 ft) long and weigh 180 kilograms (400 lb)!
- Its volume is greater than the next eight largest rivers combined!



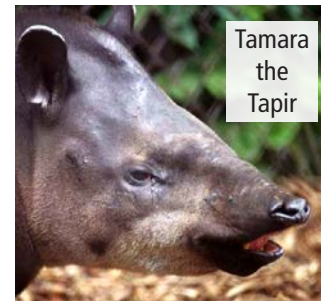
The Amazon is the world's widest and largest river.

From the Amazon Yearbook



Sammy
"Slowpoke"
Sloth

Sloths are slow-moving animals. They seem to just hang out (upside down!) in the trees.



Tamara
the
Tapir

The tapir is a big, hoofed animal that is related to the horse and the rhinoceros. Tapirs often weigh well over 136 kilograms (300 lb).



Katie
Capybara

At around 1.2 meters (4 ft) long, the capybara is the world's largest rodent. (But don't call Katie a big rat.)



Paulo the Poison
Arrow Frog

The poison arrow frog has super-bright colors. These colors warn other animals that its skin is poisonous.

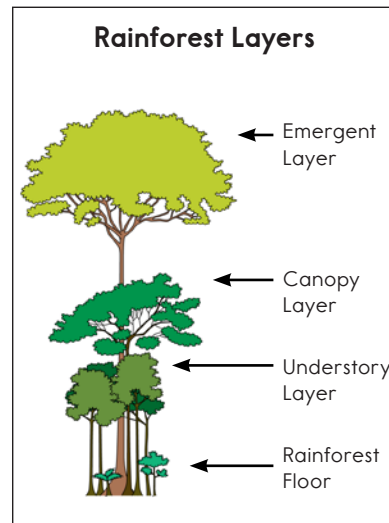
Chapter 2: Layers of the Rainforest

To better understand the rainforest, scientists have “divided” it into four parts. You can think of it like a four-story building. The highest trees make up the top floor, or the *emergent* layer. The next highest trees make up the *canopy* layer. Below them is the *understory*. At the bottom is the *rainforest floor*.

High Risers The tallest trees of the rainforest are called the *emergents*. They are like umbrellas that rise above the thick forest. Emergents receive lots of sun, wind, and rain.

Big roots support these giant trees. Because the soil isn’t deep, tree roots often grow above the ground. The kapok tree, for example, has roots that extend out like wooden walls. These roots are so big that your whole class could hide behind just one of them!

Not many animals live in the emergent layer. Some birds and butterflies eat the leaves and fruit. One huge bird, the harpy eagle, actually lives there, high above the river.



SPOTLIGHT INTERVIEW:

The Harpy Eagle

RAZ Interviewer: Hello there, Harpy. Is it true that you are the largest eagle in the Americas?

Harpy: I think so. I am about one meter tall, which is more than three feet high.

RAZ Interviewer: It looks as if you have some big wings as well.

Harpy: Oh, these things? I was born with these. If I stretch them out like this, they are longer than most people. You see? My wingspan is two meters



Harpy eagle

across—about six and a half feet.

Flying fast really helps me find food.

RAZ Interviewer: What is your favorite food?

Harpy: Oh, I like pizza delivered to my door. Just kidding—I hunt sloths, monkeys, and other birds. Monkeys are probably my favorite.

RAZ Interviewer: Is that what your big **talons** are for?

Harpy: Yep. They can scoop **unsuspecting** animals right off tree branches. Hey, there’s a monkey now! I’ll see you later!

Crazy Canopy The rainforest’s real action is in the canopy layer. This is where most plants and animals live. It is like a thick roof made out of tree branches and vines.

Many trees in the canopy are covered with climbing vines and **epiphytes**. Epiphytes are plants that grow on top of other plants. Most of the rainforest’s flowers, fruit, and seeds are found in this layer.

With so much good canopy food, it makes sense that animals hang out here. Many animals rarely go down to the ground. They spend their whole lives up in the trees. Sloths, toucans, and parrots are just some of the animals that live in the canopy. Howler monkeys are probably the loudest. Their name fits their behavior, as these monkeys howl and scream to keep other animals out of their **territories**.



Bromeliads are cone-shaped plants that grow on trees. Their cones catch a lot of rainwater and form little swimming pools high above the ground. Tiny frogs, salamanders, and crabs live in these pools. Mosquitoes and dragonflies lay eggs in them.

SPOTLIGHT INTERVIEW:

The Howler Monkey

RAZ Interviewer: Wow, that was one loud howl! Would you please stop screaming for one moment? I would like to ask you a few questions!

Howler: Okay, but hurry up. If I don’t scream like this, other monkeys may come into our territory.

RAZ Interviewer: Do you always stay up here in the canopy?

Howler: This is our home, my man. On the ground, there are some really big animals—it’s a jungle down there. Up here, we can eat fruit, leaves, and flowers, and we can live in safety.

RAZ Interviewer: Does your long tail help you? It looks **prehensile**.

Howler: Yeah, if by *prehensile* you mean “grab onto.” My tail helps me climb, but my hands and feet are very useful for climbing, too.

RAZ Interviewer: You sure use big words for a monkey. Hey, stop the howling! If you can be heard from miles away, just think how loud it is for me. What makes you so loud anyway?

Howler: I have a special bone in my windpipe. My throat is like a hollow sound box.

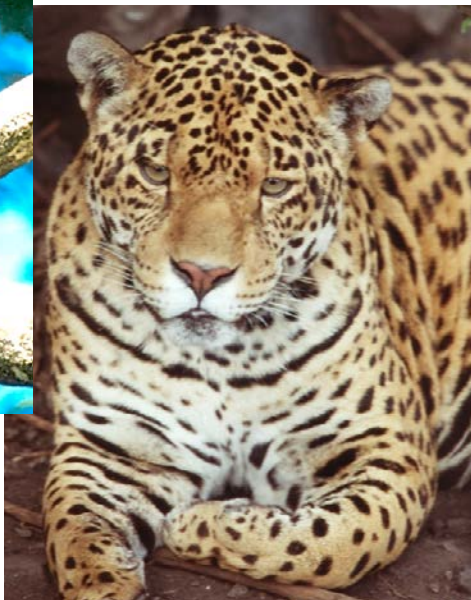
RAZ Interviewer: Okay, Mr. Monkey, you can go back to howling now.

The Darker Story The understory is the third level of the rainforest. It is below the canopy and above the ground. This is where **ferns**, plants, and young trees grow. It is dark in the understory because very little light shines through the thick canopy. Understory plants grow leaves that are big and wide to catch more sun.

Animals like to eat these big leaves. The understory is not nearly as busy as the canopy, but animals do live here. Poison arrow frogs hide in the leaves. Snakes wrap around trees like vines. Birds eat insects from the wood. Large cats such as jaguars leap between branches.



Howler monkey



Jaguar

SPOTLIGHT INTERVIEW:

The Jaguar

RAZ Interviewer: Hey, put me down! And don't bite. Bad big cat!

Jaguar: Sorry, I thought you were a monkey. What are you doing here anyway?

RAZ Interviewer: I came to talk to you, the biggest cat in the Americas. Mr. Jaguar, are you really 2.6 meters (8.5 ft.) long?

Jaguar: That's what they say. I weigh 136 kilograms (300 lb), too. Not many animals mess with me. You can call me Jag.

RAZ Interviewer: Okay, Jag, what do you do for exercise?

Jag: I get bored with just one sport. That's why I cross-train: I run, swim, climb, and fish when I hunt.

RAZ Interviewer: What do you hunt?

Jag: Sometimes I climb up in the canopy to eat sloths and monkeys. On the ground, I hunt **peccaries**, tapirs, and yummy capybaras. On lazy days, I lie near the river and catch fish. When I'm really hungry, I kill caimans.

RAZ Interviewer: Wow, I don't want to be in your powerful jaws ever again! Excuse me, I need to go now.

Chapter 3: Keeping It Clean

If you walked around the rainforest floor, you might be surprised. It is not just one thick jungle. Sure, you would see roots, plants, and baby trees. But most of the green would be high above you.

Earthworms, termites, **fungi**, and bacteria eat up the fallen fruits and parts of trees. They recycle it back into **nutritious** soil. When a big tree falls, they munch it down into small pieces.

Also on the ground are animals like deer, tapirs, peccaries, and capybaras. But there are far more spiders and bugs. Ant highways crisscross the rainforest floor. One kind of ant even parades around with leaves and flower petals in its mouth. It is the famous leaf-cutter ant.



Rainforest floor

Reaching the Top

Scientists have found creative ways to study the top layers of rainforests. They have climbed with ropes and ladders. They have built platforms like tree houses. Some have gone up in cranes. A blimp has even lowered a raft of scientists down to the canopy.

SPOTLIGHT INTERVIEW:

The Leaf-Cutter Ant

RAZ Interviewer: Hey down there! The one carrying the big leaf over your head! May I ask you a few questions?

Ms. Ant: Sure, but I do need to hurry back to the fungus garden. We're low on food.

RAZ Interviewer: Did you really just climb up a tree and cut off that leaf?



Leaf-cutter ants

Ms. Ant: Yes, and now I'm carrying it back to our underground home. That's where smaller ants will chew it up into spongy bits.

RAZ Interviewer: So you don't eat the leaf?

Ms. Ant: No, we use the leaf bits to grow the fungus that we eat. Want some?

RAZ Interviewer: No, thank you. I just had lunch. So tell me, what is it like underground?

Ms. Ant: We have deep nests with lots of rooms. In the middle rooms, small ants tend to our fungus gardens. Our queen is in a different room. She can lay up to thirty thousand eggs in one day. That's why there are almost five million of us here! Now if you'll excuse me, I need to sniff my way home. And please watch your feet—if you step on our trail, I might get lost!

Chapter 4: Who, Me?

Yes, you. Do you like to eat bananas or chocolate? Does your bicycle have rubber tires? Well, guess what! Bananas, chocolate, and rubber all grow in the Amazon rainforest. Many more things come from the Amazon, too, such as medicines and pineapples.

The Amazon is a treasure. Insects buzz by that haven't been named yet. Trees grow, fall, and turn back into soil. And rainforest plants take **carbon dioxide** from the air and replace it with oxygen. Humans and other animals need oxygen in order to live.



The Amazon rainforest is home to many living things.

The Amazon rainforest is a real place. As you read these words, a jaguar moves through the understory. Right now, a leaf-cutter ant marches back to a fungus garden. Somewhere in the Amazon, the scream of a howler monkey echoes through the forest. Can you hear it?

Explore More

Did you like learning about the Amazon rainforest? Well, there is much more to see. If you do some research, you're bound to find some very interesting animals!

1. At the Library

Tell your librarian that you are interested in books about the Amazon rainforest.

2. On the Web

In the address window, type: *www.google.com*

Then type: *Amazon rainforest*. Click on "Google Search."

Read the colored links. Click on one that looks interesting.

When you want to explore other links, click the "back" arrow on the top left.

Or try a new search: *Amazon River*



Capybara

3. Try This!

Where do you live? Do you live in the rainforest? What about in a desert, tundra, or pine forest? Do you live on the coast, up in the mountains, or out on the plains? You must live somewhere, right?

If you live in a town or city, sometimes it can be hard to tell what kind of region you live in. But there are clues all around. What kinds of trees and bushes grow nearby? What kinds of birds fly overhead? What is the weather like? Look around and investigate. If you are not sure, ask your teacher, librarian, parent, or friend.

Once you figure it out, make a report. Draw a picture like the one on page 9, but make it for your area. What kind of insects, plants, and animals are native to your home? You could find this information by walking around outside. You could also ask other people. Or you could read a book or search the Web. You'll probably be surprised by the cool things you learn about your neighbors!

Glossary

carbon dioxide (*n.*) page 17

an invisible gas that is formed by the chemical breakdown or burning of organic substances, such as fossil fuels, and that is absorbed by plants during photosynthesis

epiphytes (*n.*) page 11

plants that grow on top of other plants instead of being rooted in soil and get their nutrients from air and rain

ferns (*n.*) page 13

leafy plants without flowers or seeds

fungi (*n.*) page 15

plural form of "fungus"; a living thing that grows on organic material and produces spores

nutritious (*adj.*) page 15

containing nutrients needed for life and growth; nourishing

peccaries (*n.*) page 14

nocturnal pig-like mammals found in the Americas

prehensile (*adj.*) page 12

able to hold or pick up things

ranges (*v.*) page 5

changes within set limits

species (*n.*) page 5

a group of living things that are physically similar and can reproduce

talons (*n.*) page 10

claws on the feet of birds such as owls, hawks, and eagles

territories (*n.*) page 11

areas of land or water that animals or groups of animals defend and live in

unsuspecting (*adj.*) page 10

unaware of potential danger